CLAIMS

Listing of Claims:

1. (Previously Presented) A brake control system for a wheel of a vehicle in motion comprising:

a) an accelerometer attached to the vehicle and configured to measure a deceleration of the vehicle and output a deceleration signal;

b) a brake pressure sensor configured to output a brake pressure signal; and

c) a brake controller configured to:

receive a plurality of deceleration signals from the accelerometer and calculate a change in measured deceleration over time;

receive the brake pressure signal and calculate a change in an applied brake pressure; and

calculate a brake pressure adjustment signal using the calculated change in measured deceleration and the calculated change in applied brake pressure.

2. (Previously Presented) A method for controlling a braking operation of a wheel of a vehicle in motion, comprising:

applying brake pressure to a wheel of a vehicle;

measuring a deceleration of the vehicle;

measuring the brake pressure applied to the wheel;

increasing the brake pressure to the wheel after the brake pressure has been applied;

calculating a change in deceleration of the vehicle from a first time frame to a second time frame;

calculating a change in the measured brake pressure applied to the wheel from the first time frame to the second time frame; and

reducing the brake pressure applied to the wheel when the calculated change in measured deceleration becomes negative and the calculated change in measured brake pressure applied to the wheel is greater than or equal to zero.

3. (Previously Presented) The method of claim 2, wherein the measured deceleration is computed as a vector equal to a hypotenuse in a right-angle triangle where longitudinal and lateral acceleration are equal to sides adjacent to the right-angle of the triangle.

4. (Previously Presented) The system of claim 1, wherein the vehicle is an aircraft.

5. (Previously Presented) The system of claim 1, wherein the wheel brake is an automatic brake.

6. (Previously Presented) The system of claim 1, wherein the wheel brake is a manual brake.

7. (Previously Presented) The method of claim 2, wherein the vehicle is an aircraft.

8. (Previously Presented) The method of claim 2, wherein the brake pressure is applied with an automatic brake.

9. (Previously Presented) The method of claim 2, wherein the brake pressure is applied with a manual brake.

10. (Original) The system of claim 1, wherein the measured deceleration is computed as a vector equal to a hypotenuse in a right-angle triangle where longitudinal and lateral acceleration are equal to sides adjacent to the right-angle of the triangle.

11. (Original) The system of claim 1, wherein the measured deceleration is a vehicle longitudinal acceleration, lateral acceleration, or vertical acceleration.

12. (Original) The system of claim 1, wherein the brake controller is further adapted to determine a maximum braking capability of the vehicle using the measured deceleration of the vehicle.

13. (Original) The system of claim 1, wherein the vehicle deceleration signal comprises a vehicle longitudinal, lateral, or vertical acceleration data.

14. (Original) The system of claim 1, wherein the brake controller is further adapted output deceleration data to a data storage file or a display.

15. (Original) The method of claim 2, wherein the measured deceleration is a vehicle longitudinal acceleration, lateral acceleration, or vertical acceleration.

16. (Original) The method of claim 2, further comprising determining a maximum braking capability of the vehicle using the deceleration of the vehicle.

17. (Original) The method of claim 2, wherein brake pressure applied to the wheel is reduced by a predetermined pressure increment.

18. (Original) The method of claim 2, wherein the measured deceleration of the vehicle represents information about optimal braking capability of the vehicle when the calculated change in measured deceleration becomes negative and the calculated change in measured brake pressure applied to the wheel is greater than or equal to zero.

19. (Original) The method of claim 2, further comprising measuring velocity of the vehicle, and applying the brake pressure to the wheel only when velocity is greater than zero.

20. (Original) The method of claim 2, wherein the brake pressure to the wheel is increased incrementally.